

WHAT IS CLAIMED IS:

1. A substrate cutting method of detecting a position of a guide line provided in correspondence to a slice line and cutting a substrate along said slice line while correcting a cutting position.

2. A method according to claim 1, wherein said guide line is used as a guide line of said slice line and is, thereafter, set to a slice line for cutting.

3. A method according to claim 1, wherein said guide line is formed simultaneously with said slice line.

4. A method according to claim 1, wherein said guide line is an electrode line provided on the substrate.

5. A method according to claim 1, wherein the detection of said position is executed by using a light source and a photoelectric converting element.

6. A method according to claim 1, wherein said cutting is executed by a rotary blade.

7. A method according to claim 1, wherein said slice line and said guide line are formed by electrode

0801464 021897

10

15

20

25

layers provided on the substrate.

8. A method according to claim 7, wherein said electrode layer is formed by a same material as that of an electrode line formed on said substrate.

9. A method according to claim 7, wherein said electrode layer is formed simultaneously with an electrode line formed on said substrate.

10. A method according to claim 1, wherein said slice line and said guide line are arranged in parallel.

11. A substrate cutting method whereby when a substrate on which a slice line and a guide line are formed is cut along said slice line of said substrate, a misalignment is detected by detecting said guide line upon said cutting and the substrate is cut while correcting said misalignment.

12. A method according to claim 11, wherein said slice line and said guide line are electrode lines constructing a thin film semiconductor element formed on said substrate.

13. A method according to claim 11, wherein said

00004454.021897

guide line is commonly used as said slice line.

14. A substrate cutting apparatus comprising: ✓

a cutting mechanism;

5 a unit for relatively moving a cutting position of
said cutting mechanism for an object to be cut;

a unit for detecting a position at a position
different from said cutting position; and

10 a unit for adjusting the cutting position on the
basis of position information by said position
detecting unit.

15 15. An apparatus according to claim 14, wherein
said cutting mechanism has a cutting unit. ✓

16. An apparatus according to claim 15, wherein
said cutting unit has a rotary blade or a water jet
nozzle.

20 17. An apparatus according to claim 16, wherein
said position detecting unit has a photoelectric
converting apparatus.

25 18. A substrate cutting apparatus for cutting a
substrate on which a slice line for cutting the
substrate and a guide line for detecting a misalignment
upon cutting, comprising: ✓

030444 02139
253120 4940880

a unit for cutting said slice line;

a unit for detecting the misalignment by detecting
said guide line upon said cutting; and

a unit for correcting a misalignment quantity when
5 said misalignment occurs during the cutting.

add
Ab

add
B2

00001454 021397